

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

September 13, 2006 Meeting

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Robin Harkless

Notes: Erin Halton

The following notes are a summary of issues that are intended to point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the "record" of the meeting, only a reminder for TMT members.

Presentation: Behavior of Chum Spawners '05-'06

Ken Tiffan, USGS, reported on findings from the BPA-funded study of the 2005-2006 chum spawning season near Ives Island. Tiffan stated that the goals of the study included a complete record of each tagged fish, how often fish were digging, courtship behavior and, ultimately whether fish would successfully spawn, given various flow events. Tiffan noted that while the sample sizes were small, the duration of the tests (8 hrs. usually from 8 am – 4pm) were longer than tests done in 2004. Observations included variable digging for any given pair (consistently, digging reduced during flow testing and then returned during 'normal' flows). Temperature was also studied and is being analyzed. Tiffan said that thermal cues may need to be in place longer to see if variations in temperatures have any effect on redd site selection.

Conclusions: Some fish were displaced from their redds at tailwater elevations of 15.5', but then returned after flows decreased. Four of the eight pairs of chum spawned following flow tests. No fish entered newly inundated areas to spawn, nor were redds found at higher riverbed elevations (perhaps due to the low abundance of fish in 2005). Elevated flows contributed to short-term interruptions in spawning. Swimming activity increased with increased velocity.

Ken noted that funding is in place to continue studies this year. While he hopes to duplicate the test from 2005 to get a better sample size and more conclusive information, he remained open to suggestions from TMT members on how to shape the test this year.

Next Steps: USFWS noted that there are studies on spawning trends planned for Multnomah Falls and other areas. TMT members will continue discussion of potential '06 -'07 chum studies at the 9/27 TMT meeting and share feedback with Ken.

Libby / Hungry Horse Operations Check-In

Cathy Hlebechuk, COE, reported that Libby elevation was at 2440.6', with outflows at 9 kcfs. ESP inflow analyses depicting Libby releases continuing at 9 kcfs through September showed a very small expected elevation range, of 2437.8' - 2437'. Robin MacKay, BPA, noted that Bonneville will likely request ramping down to 6 kcfs at the end of September. As ramp rates between 9-6 kcfs for September are 1 kcfs per day, the

ramp down will likely begin on the evening of September 27th. The action agencies noted the continued need for flexibility with respect to power needs, and agreed to check status again at the TMT meeting on 9/27.

Dworshak Operations

Cathy Hlebechuk, COE, reported that Dworshak elevation was at 1520.5' as of the evening of 9/12. As per the Dworshak Operations Board's plan for September hold at 7.4 kcfs (one big unit / one small), and then dropped to 4.5 kcfs on 9/6. The Board requested flows drop to one small unit (2.4 kcfs) when the reservoir elevation reached about 1521', then dropped to minimum flow when the project reached 1520'. As of 9/13, flows were down to 2.4 kcfs. At 2200 hrs on 9/13, the COE planned to drop to minimum flows (1.3-1.6 kcfs).

Adult Migration Update

Cindy LeFleur, WDFW, gave an update on the adult migration: through 9/11, numbers were below the forecast, with the brights count over Bonneville at 142,000 (vs. predicted 187,000) and the tule count at 23,000 (vs. predicted 33,000.) LeFleur noted that the forecast would be updated the afternoon of 9/13, and that the numbers would likely result in a downgrade, which would impact fisheries. LeFleur will update TMT on adult migration status at the 9/27 meeting.

Lake Pend Oreille Fall/Winter Operation / Draft SOR #2006 C-6

Russ Kiefer, ID, shared a draft SOR with TMT members, per request from the action agencies to see a draft proposal as soon as possible. Kiefer said that the annual Lake Pend Oreille SOR's intent are to continue testing the beta version of the 'decision tree' in hopes of finding areas for improvement and to bring confidence and support for use of this tool as a guide for future operations. With female kokanee abundance numbers below target levels and an expected dry fall season, the SOR requests a drawdown to minimum lake levels. The SOR also requests keeping the lake full as long as is reasonably possible, to test the concept of impacting lake trout spawning, provide better synchronicity between flow augmentation provided and salmon spawning below Bonneville Dam, and provide increased flows when power markets are likely better. The SOR proposes that the lake be held at full pool as long as reasonable possible, hopefully at least October 7th, and target November 20th for reaching the winter elevation of 2051', with flexibility built in on both ends of the operation to correspond with actual conditions.

A question was raised about the impact of spill if necessary to meet the objectives in the SOR. Kiefer said that the preference is to avoid spill if possible, and to comply with water quality standards. The COE noted that there will be a continued need for flexibility with regard to precipitation, unit outages and the needs of fish and power. Idaho acknowledged this flexibility need. Kiefer added that studies will be done on lake trout redds which should aid in making informed recommendations for next year. Per the USFWS bull trout BiOp, a long term lake level management plan is expected to be in place by the end of 2007.

While the SOR was at this time still a draft, participating TMT members shared their responses. The COE, NOAA, BPA, BOR, USFWS, Oregon and Washington voiced their support for the draft SOR. Rick Kruger, ODFW, added that from Oregon's perspective, holding the lake up as long as possible would provide the most benefit for chum. Jim Yost, Idaho, thanked the action agencies for their support, and commended the folks who worked to put the proposed operation together.

Action/Next Steps: Russ will send a final version of the SOR to the COE for distribution to TMT and posting on the web. The final draft will include NOAA's sign-off and language about the action agencies' need for operating flexibility with regards to unit outages.

Treaty Fishing SOR's

Kyle Dittmer, CRITFC, reported on the latest Autumn treaty request for fishing 9/11-15. He noted CRITFC's concern regarding the Net Flight Survey results: as of 9/6, the John Day elevations were 1' below the desired elevation. Dittmer reiterated the requested hard constraint of 1' from full at John Day, The Dalles and Bonneville pools, as well as the desire to keep fluctuation to a minimum. COE agreed to operate Bonneville within the 1.5' range as a hard constraint (1' soft). CRITFC will submit a final autumn treaty SOR at the TMT meeting on 9/27.

End of MOP at Lower Granite

Paul Wagner, NOAA, reported that Lower Granite was cooling but not quite at the range for recommending end of MOP (~65 degrees). The current range was 66-67 degrees. Anatone was in the range of 68-70 degrees. Given the natural cooling trend occurring, the recommendation will likely be to end MOP the first week in October. All will continue to monitor temperatures and there will be a check in on this at the 9/27 TMT meeting.

End of Transport at McNary

There was a request from the project to stop transport at McNary because of the low number of juvenile salmonids and the high number of shad being collected at the project, Wagner said. In other words, there are very few juvenile salmon moving through the system now, and transport conditions are far from optimal. We discussed this at yesterday's FPAC meeting, and the consensus of the group was that we should go to bypass at McNary, and stop transport at this time.

Scott Dunmeyer noted that stopping transport at McNary could impact the ongoing fall Chinook research program – was that discussed at FPAC? Scott Dunmeyer said full-flow bypass at McNary should allow for PIT-tag detection. In other words, that should be OK for the fall Chinook transport study, he said. Marvin Shutters agreed. We also understand that transport is being ended at Lower Monumental, he said. Typically that happens at the end of September, Wagner replied – we did not discuss ending transport at Lower Monumental at yesterday's FPAC meeting.

Shutters asked that, if possible, the TMT delay making a decision on the end of transportation at McNary for a few more days, to allow the Corps to consider the full

impact of ending transportation at McNary on the fall Chinook transport study. After a brief discussion, it was agreed to give the Corps one more day to analyze this proposed change in operation; unless the Corps produces compelling information suggesting that it would be unwise to cease McNary transport at this time, McNary transport will stop on Friday, September 15. It was agreed to notify the TMT membership via email once a final decision is made.

Action: Cathy Hlebechuk will communicate via email by 9/15 as to the results of the off-line discussion and resulting operation, and there will be a check in on Lower Monumental at the 9/27 TMT meeting.

2007 Water Management Plan

Bernard Klatte, COE, reported that the first draft 2007 WMP and Fall/Winter Updates have been posted to the TMT website. No changes from the 2006 draft have been made at this point, and the action agencies requested that TMT members review and submit changes, additions, etc. based on expected 2007 operations, before the September 27 TMT meeting.

ACTION: Bernard will email the draft WMP in 'Word' to TMT members, who will track changes on the document and send them back to Bernard by September 26. Individual comments will be posted to the TMT web page as they come in. TMT will discuss comments to the WMP at the next meeting.

Operations Review

Reservoirs: Grand Coulee was at elevation 1282.1'. Hungry Horse was at 3544.35' and releasing 2.8 kcfs to meet Columbia Falls minimums. Libby was at elevation 2440.6' and releasing 9 kcfs. Dworshak was at 1520.5', planning to drop to 1.4 kcfs this evening (9/13). McNary average flows have been 80-111 kcfs. Flip lips are being installed at Chief Joseph and an RSW is being installed at Lower Monumental.

Fish: Paul Wagner, NOAA, reported that juvenile numbers were below 100 at all the projects and that full transport has been ongoing, slated to end soon. The adult Fall Chinook migration appears to have peaked, at about 14,000, on 9/9. Numbers dropped to 5,000-6,000 over the last few days. Overall numbers are lower than last year. Steelhead numbers are higher than last year, with 273,000 total for the year (70,000 wild).

Power: Nothing to report at this time.

Water quality: Linked to the agenda is a summary of 2006 water quality exceedances.

Next TMT Face-to-Face Meeting, September 27th, 9:00-noon

Agenda Items include:

- 2006 - '07 Chum Studies
- Libby / Hungry Horse Operations Check-In
- Treaty Fishing SOR
- Adult Migration Update

- Albeni Falls/Lake Pend Oreille Operations
- End of MOP at Lower Granite
- End of Transportation at Lower Monumental
- Draft 2007 Water Management Plan/Comments Review
- Operations Review

Technical Management Team Meeting Notes

September 13, 2006

1. ***Greetings and Introductions.***

Today's Technical Management Team meeting was chaired by Cathy Hlebechuk and facilitated by Robin Harkless. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at this meeting. Anyone with questions or comments about these notes should contact Hlebechuk at 503-808-3942.

2. ***2005-2006 Chum Study Results.***

Ken Tiffan led this presentation, noting that this study was funded by BPA. We were looking at behavioral effects on chum salmon in the Ives Island area in response to elevated flows, he explained, noting that the data he will be presenting and his conclusions are based on very small sample sizes.

Tiffan explained that, as part of the study, USGS requested higher flow and elevation levels for two-hour and longer periods, beginning in 2004. We're pretty pleased with the test conditions we've been able to obtain so far, he said; we had an acoustic array deployed and tagged fish with acoustic transmitters. We're still analyzing that data, he said, but I do have some behavioral data to show you today – how often fish dig, courtship behavior, spawning events. Ultimately, what we were interested in is, what effect do we have on actual spawning in response to these flow events?

Tiffan went through his presentation, touching on the following major topics:

- Digs per 15-minute interval, over time (8 hours) for individual spawning pairs (graphs)
- Temperature data (graphs)
- Conclusions: fish are displaced at elevation 15.5 feet, but the fish do return to their redd sites, and did spawn successfully. Didn't find redds at higher river elevations. Only looked at Ives Island area; no conclusions can be drawn about I-205 or Multnomah.

- Consequences of higher flows: depressed thermal clues, increased energy cost, (see presentation)

We're still analyzing the data, said Tiffan, so these conclusions probably aren't complete. If flows were to be maintained to create a tailwater elevation of 13.5 feet for, say, two weeks, we might see some redds deposited at higher elevations. Any thoughts about daytime vs. nighttime spawning? Paul Wagner asked. We haven't seen any difference between day and night, Tiffan replied – once the fish select a mate and a redd site and spawning begins, they go at it until they're done. We don't know about diel differences in terms of the timing of mate selection, however, Tiffan added.

Are you planning to repeat this work in 2006? David Wills asked. That's up to you guys, Tiffan replied – I would like to continue this work, and there may be an opportunity to double our sample size. We'd like to stay with an 8-hour test, and evaluate the 13.5-foot tailwater elevation, to see whether fish will enter the newly-inundated areas. It would certainly be nice to have a few more data points, Tiffan said. Do you have a plan of study? Hlebechuk asked. We do, but it needs to be fleshed out, Tiffan replied – I could propose that we do the same thing in 2006 that we did in 2005, if you're willing to provide the flows we need. After a brief discussion, it was agreed that the TMT members will consider the desirability of a 2006 test and will discuss it further the next TMT meeting. Wills said he is, at least initially, supportive of such a test. Tiffan said he will need the TMT's feedback by the end of October if a 2006 test is to start in a timely fashion.

3. *Libby Operations.*

Hlebechuk said Libby is currently at elevation 2440.6 feet, releasing 9 Kcfs. The last time we talked, we discussed maintaining that flow volume and revisiting the Libby operation at today's meeting, to see whether a reduction in outflow to something closer to the 6 Kcfs minimum outflow is desired, Hlebechuk said. She provided the most recent ESP runs, showing expected end-of-September elevations at Libby under various operational scenarios. Bonneville will probably be requesting that Libby outflow be stepped down to 6 Kcfs during the last week in September, and that outflow be held to minimum in October, said Robin MacKay. Hlebechuk noted that the ramp rate is 1 Kcfs per day, which means the rampdown from 9 Kcfs would need to take place over three days, beginning on September 28. Is that acceptable to the TMT? Hlebechuk asked.

After a brief discussion, MacKay said BPA doesn't need a decision today; that's the plan, at this point, she said, but we can revisit it later in the month. It was agreed to discuss this topic again at the September 27 TMT meeting. In the interim, Libby will continue to release 9 Kcfs, with the flexibility to increase flow above 9 Kcfs if power needs change. In response to a question, MacKay said Bonneville has discussed this plan with Montana.

4. *Dworshak Operations.*

Dworshak reached elevation 1520.5 feet last night at midnight, said Hlebechuk. The Dworshak Operations Board – Paul Wagner, Bill Graham from Idaho, Greg Haller and Cindy Henriksen – came up with a plan for September operations. The request was to hold 2 units – 7.6 Kcfs – until September 6, then go to one large unit (4.4 Kcfs) until elevation 1521 was reached. Project outflow was then reduced to one small unit (2.8 Kcfs) until elevation 1520 is reached,. Dworshak outflow will be reduced to minimum (1.3 Kcfs) beginning tonight at 10 pm.

5. *Adult Fall Chinook Returns.*

Cindy LeFleur said the compact is meeting again today to downgrade the fall Chinook forecast, particularly for upriver brights. Is it common for the forecast to be downgraded? Wagner asked. It happens in some years, LeFleur replied. [see presentation on-line]. We'll get a further report in two weeks, said Harkless

6. *SOR for Lake Pend Oreille Winter Operations.*

Russ Kiefer noted that this is a draft SOR; we should have a final SOR soon, he said. We wanted to give you our thinking, however, so the action agencies can begin planning for operations later this fall and winter. As you know, we have a draft decision tree for Lake Pend Oreille winter operations, he said; we have been trying out different operations for the past several years to test our confidence in that decision tree.

The SOR requests keeping the lake full as long as is reasonably possible, to test the concept of impacting lake trout spawning, provide better synchronicity between flow augmentation provided and salmon spawning below Bonneville Dam, and provide increased flows when power markets are likely better. The SOR proposes that the lake be held at full pool as long as reasonable possible, hopefully at least October 7th, and target November 20th for reaching the winter elevation of 2051', with flexibility built in on both ends of the operation to correspond with actual conditions.

One of the critical factors for the request of 2051' is the estimated adult kokanee spawner abundance, Kiefer said. The bad news is that female kokanee abundance is below the threshold this year – only 17,000 – so the available spawning substrate at the lower level will be adequate. We are very concerned about the persistence of kokanee in that lake, he said, because you will recall that Albeni Falls used to support a kokanee harvest of more than 1 million adult fish. The lake is also home to listed bull trout, he said, so

we're concerned about a potential shift to lake trout as the dominant species if the kokanee population is lost.

IDFG is determined to rebuild the kokanee population in Lake Pend Oreille, Kiefer said, but we're in trouble this year. Lake drawdown is intended to allow wave action to clean the spawning gravel, which provides better conditions for egg-to-fry survival, Kiefer explained. The decision tree strongly recommends that we go to the lower drawdown level, elevation 2051, in 2006, he said.

Another thing the SOR request is... [see SOR]. Kiefer noted that the drawdown operation has benefits for both power production and flow augmentation for chum. Rick Kruger said Oregon supports the drawdown operation requested in the SOR. Wagner said NOAA Fisheries also supports the SOR. LeFleur said WDFW does as well. MacKay said Bonneville has no problem with this SOR. Tony Norris said Reclamation has no objections to the SOR.

The group discussed the details of IDFG's kokanee enhancement and lake trout suppression programs; it was noted that lake trout are an exotic species, introduced to Lake Pend Oreille by the old "fish trains" in 1925. Dave Statler said that, in his view, if the techniques used in 2006 are successful, the situation is critical enough that IDFG might want to consider more aggressive action over the next few years to get the lake trout population under control and to enhance kokanee spawning success. The group also discussed the membership and function of the Idaho Lakes Commission, created by the Idaho Governor's office to make recommendations about lake operations, environmental concerns and water quality issues in the north Idaho lakes basins. The group was created by the Legislature and its members are appointed by the Governor to represent a broad range of local interests.

In response to a question, Kiefer said the goal is for IDFG to submit a final Albeni Falls/Lake Pend Oreille SOR within a week. Hlebechuk said it is the Corps' intent to implement this SOR as requested. She said she will email the final SOR to the TMT membership once it is received.

Update: Russ Kiefer submitted the final SOR on Friday, September 15. Russ Kiefer, Susan Martin (USFWS), Paul Wagner (NMFS) and Ford Elsaesser (Pend Oreille/Priest Lakes Commission) also signed on as submitting the SOR. As per discussion at TMT meeting September 13, the Corps agreed to implement the plan, barring unforeseen precipitation.

7. *Treaty Fishing.*

Kyle Dittmer said CRITFC submitted SOR 2006-CRITFC-6, requesting a treaty fishery to run through September 15. The SOR requests that

Bonneville, The Dalles and John Day pool be held within a one-foot operating range during the fishery. Dittmer said one more treaty fishing SOR may be forthcoming. He said a net flyover determined that there are 32, 24 and 44 percent of the nets in Bonneville, The Dalles and John Day pools, respectively.

Dittmer expressed concern that compliance with the requested operation dropped to 59 percent within John Day pool over the past week, down from 93 percent compliance with the requested one-foot band during previous treaty fishing periods. Hlebechuk replied that Col. Mogren agreed to implement a 1.5-foot operating range within Bonneville pool only; that is the operation the Corps has agreed to. Dittmer replied that, in CRITFC's view, the operation requested in the SOR should be the official operation. CRITFC would like to see the pools held as full as possible and within a one-foot operating range. Hlebechuk said that, as usual, the Corps' direction, since 1998, is to operate Bonneville pool within a 1.5-foot range during the treaty fishing season. Normal operations at The Dalles and John Day are as follows: The Dalles is operated within a three-foot range, while John Day is operated within a 1.5-foot range through the end of September. Unless we hear otherwise, that is the plan, she said. After October 1, John Day pool will be operated within a 2.5-foot range, Hlebechuk added.

8. *End of MOP at Lower Granite.*

Wagner said the normal plan, under the BiOp, is to reduce Lower Granite to MOP once natural cooling occurs. However, cooling has not really occurred yet -- temperatures at Anatone are still in the 68-70 degree range, while temperatures in the Lower Granite tailrace are still about 66 degrees. He said NOAA Fisheries would prefer to see Lower Granite tailrace temperatures of 65 degrees or less before the project is drafted to MOP. He suggested that it would probably make sense to revisit this issue at the September 27 TMT meeting. I'll put it on the agenda, Harkless said.

9. *McNary Transport.*

There was a request from the project to stop transport at McNary because of the low number of juvenile salmonids and the high number of shad being collected at the project, Wagner said. In other words, there are very few juvenile salmon moving through the system now, and transport conditions are far from optimal. The Salmon Managers discussed this, and the consensus of the group was that we should go to bypass at McNary, and stop transport at this time.

Scott Dunmeyer noted that stopping transport at McNary could impact the ongoing fall Chinook research program -- was that discussed at FPAC? Scott Dunmeyer said full-flow bypass at McNary should allow for PIT-tag detection.

In other words, that should be OK for the fall Chinook transport study, he said. Marvin Shutters agreed. We also understand that transport is being ended at Lower Monumental, he said. Typically that happens at the end of September, Wagner replied – we did not discuss ending transport at Lower Monumental at yesterday's FPAC meeting.

Shutters asked that, if possible, the TMT delay making a decision on the end of transportation at McNary for a few more days, to allow the Corps to consider the full impact of ending transportation at McNary on the fall Chinook transport study. After a brief discussion, it was agreed to give the Corps one more day to analyze this proposed change in operation; unless the Corps produces compelling information suggesting that it would be unwise to cease McNary transport at this time, McNary transport will stop on Friday, September 15. It was agreed to notify the TMT membership via email once a final decision is made.

10. *Operations Review.*

Reclamation reported that Grand Coulee is at 1282.1 feet, currently; Hungry Horse, 3544.35, discharging 2.8 Kcfs to meet the Columbia Falls minimum flow. The Corps reported that the current Libby elevation is 2440.6 with 9 Kcfs outflow. Dworshak was at elevation 1520.5 feet last night; outflow was reduced to 4.4 Kcfs last night, and will be reduced further to 1.4 Kcfs tonight. Over the past several days, the average flow at Lower Granite has been 21-27 Kcfs; at McNary, 80-120 Kcfs. Flip-lip installation has begun at Chief Joseph, an operation that will be ongoing for the next couple of years.

Moving on to fish, Wagner said juvenile numbers have fallen well below 100 fish per day in recent days throughout the system. The juvenile migration has now ended, in terms of the passage indices, he said. The spill program has now ended. With respect to adults, he said, fall Chinook passage peaked at 14,000 on September 9 and have since decreased to about 5,000 fish per day past Bonneville. We'll see if the rain stirs them up, he said. Steelhead numbers have been very steady, with 270,000 steelhead for the year, including 70,000 wild steelhead, and about 4,000 fish per day passing Bonneville, currently. A total of 69,000 fall Chinook have passed Bonneville to date, compared to just under 270,000 last year. Steelhead are up from 242,000 for this date last year, so the 2006 steelhead run is slightly better than the 2005 run.

Bonneville said there are no power system issues to be reported at today's meeting. Laura Hamilton went briefly through recent water quality information, noting that exceedence times for the entire 2006 season are now listed on the TMT homepage. Hamilton added that every station in the Lower Columbia continues to report water temperatures in excess of 68 degrees, although natural cooling is expected to begin soon.

11. 2007 Water Management Plan.

The goal for today's meeting was to give the action agencies a chance to briefly describe any changes from the 2006 plan, Harkless said. Norris said few changes have been made so far; if there are things we do every year that need to be memorialized in this document that are not currently memorialized, or there are sections that need to be rewritten, perhaps you can let us know prior to the next TMT meeting, he said. Hlebechuk said the target date to finalize the Water Management Plan is the end of September, so any comments received prior to that date would be very helpful. It was so agreed. It was further agreed that Bern Klatte will email the draft 2007 WMP directly to the TMT membership.

12. Next TMT Meeting Date.

The next Technical Management Team meeting was set for Wednesday, September 27. [3 hours]

TMT Meeting Participants
September 13, 2006

Name	Affiliation
Rudd Turner	COE
Robyn MacKay	BPA
Paul Wagner	NOAAF
Tony Norris	USBR
Cathy Hlebechuk	COE
Richelle Beck	D. Rohr & Associates
Laura Hamilton	COE
Robin Harkless	Facilitation Team
Russ Kiefer	IDFG
David Wills	USFWS
Don Faulkner	COE
Rick Kruger	ODFW
Jim Adams	COE
Matt Howard	USBR
Russ George	WMCI
Dan Spear	BPA
Kyle Dittmer	CRITFC
Jim Yost	Idaho Governor's Office
Dave Statler	NPT
Greg Hoffman	COE
Margaret Filardo	FPC
Glenn Traeger	Avista
John Wasch	Bear Energy
Tom Le	PSE

Cindy LeFleur	WDFW
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